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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/459,573	12/13/1999	VITALIY ARKADIEVICH LIVSHITS	0010-1066	1340

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EXAMINER

RAMIREZ, DELIA M

ART UNIT PAPER NUMBER

1652

DATE MAILED: 07/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action	Application No. 09/459,573	Applicant(s) LIVSHITS ET AL.	
	Examiner Delia M. Ramirez	Art Unit 1652	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 02 June 2004 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

PERIOD FOR REPLY [check either a) or b)]

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.
- b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection. **ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).**

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on _____. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☐ The proposed amendment(s) will not be entered because:
- (a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);
 - (b) ☐ they raise the issue of new matter (see Note below);
 - (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
 - (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____.

3. ☒ Applicant's reply has overcome the following rejection(s): see attached.
4. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☒ The a) ☐ affidavit, b) ☐ exhibit, or c) ☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: see attached.
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7. ☒ For purposes of Appeal, the proposed amendment(s) a) ☐ will not be entered or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: none.

Claim(s) objected to: none.

Claim(s) rejected: 45-50, 52 and 53.

Claim(s) withdrawn from consideration: none.

8. ☐ The drawing correction filed on _____ is a) ☐ approved or b) ☐ disapproved by the Examiner.
9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____.
10. ☐ Other: _____

ADVISORY ACTION

1. Claims 45-53 are pending.
2. The request for entering amendments to claims 45-46 and cancellation of claim 51, as well as arguments filed on 6/2/2004 under 37 CFR 1.116 in reply to the Final Action mailed on 3/19/2004 are acknowledged. The proposed amendments to the claims will be entered since they are deemed sufficient to overcome the objections and 103(a) rejection previously applied. While Blattner et al. in view of Vrljic et al. and Kojima et al. suggest the overexpression of the YahN gene (SEQ ID NO: 9) by increasing the gene copy number in an Escherichia cell for the production of L-lysine, none of the references alone or in combination suggest that expression of the E. coli YahN gene in an Escherichia cell would result in the production of L-proline or L-glutamic acid. Since the claims as amended are now directed to a method for the production of L-proline and L-glutamic acid, this rejection is hereby withdrawn. However, entry of these amendments is not deemed sufficient to place the application in condition for allowance for the following reasons.
3. Claims 45-50, 52 and 53 would remain rejected under 35 USC 112, first paragraph, written description and scope of enablement for the reasons of record. The claims are still directed to a method for producing L-glutamic acid and/or L-proline by cultivating an Escherichia cell transformed such that the copy number of a DNA coding for a protein which has an activity of excreting L-proline, L-lysine, and L-glutamic acid, is increased, and wherein said DNA hybridizes under the conditions recited to the polynucleotide of SEQ ID NO: 9. Applicants argue that the Examiner is refuting Applicant's data and that no corroborated reasons have been presented to support the Examiner's position. Applicants also submit that the genus of polynucleotides which hybridize under the conditions recited in the claims which encode proteins capable of excreting glutamic acid or proline is small. Therefore, it is Applicant's contention that one of skill in the art can determine if those polynucleotides encompassed by the claims

encode proteins having the desired function. Applicants further argue that according to Examples 3 and 7, L-lysine production is not as good as L-proline or L-glutamic acid production, thus it is reasonable to conclude that the polypeptide of SEQ ID NO: 10 has a broad specificity with respect to amino acid excretion.

4. Applicant's arguments have been fully considered but are not deemed persuasive to overcome the 35 USC 112, first paragraph rejections previously applied. It is reiterated herein that Applicant's data, specifically Examples 3 and 7, only show that there is an increase in the production of L-proline, L-lysine and L-glutamic acid when the copy number of the E. coli YahN gene is increased in E. coli cells. While the Examiner acknowledges that the increase in production of L-glutamic acid and L-proline is somewhat larger compared to that of L-lysine, none of these examples provide any evidence that would show that the YahN gene product is an L-proline or L-glutamic acid excreting protein. In view of the structural similarity between the E. coli YahN gene product and that of the LysE gene product from C. glutamicum, one of skill in the art can only predict that the YahN gene product is a Lys transport protein. The increase in Lys production appears to support that prediction. In the absence of any additional characterization of the YahN gene product, or any known structural characteristics associated with L-glutamic acid or L-proline excreting proteins present in the polypeptide of SEQ ID NO: 10, one cannot reasonably conclude that the YahN gene product is an L-proline or L-glutamic acid transport protein and additional experimentation would be required to determine the actual specificity of the YahN gene product regarding these amino acids. Therefore, in view of the evidence presented and the prior art, one cannot reasonably conclude that the claimed invention is adequately described or fully enabled for the full scope of the claims.

5. It is reiterated herein that the claims would be allowable if claim 45 is amended to limit the excreting activity in step (B) to lysine.

6. For purposes of Appeal, the status of the claims is as follows:

Claim(s) allowed: NONE

Claims(s) objected to: NONE

Claim(s) rejected: 45-50, 52 and 53

Claim(s) withdrawn from consideration: NONE


7. Certain papers related to this application may be submitted to Art Unit 1652 by facsimile transmission. The FAX number is (703) 872-9306. The faxing of such papers must conform with the notices published in the Official Gazette, 1156 OG 61 (November 16, 1993) and 1157 OG 94 (December 28, 1993) (see 37 CFR 1.6(d)). NOTE: If Applicant submits a paper by FAX, the original copy should be retained by Applicant or Applicant's representative. NO DUPLICATE COPIES SHOULD BE SUBMITTED, so as to avoid the processing of duplicate papers in the Office.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Delia M. Ramirez whose telephone number is (571) 272-0938. The examiner can normally be reached on Monday-Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Ponnathapura Achutamurthy can be reached on (571) 272-0928. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1234.

Delia M. Ramirez, Ph.D.
Patent Examiner
Art Unit 1652

DR
July 6, 2004


(100)